



Col. Mark E. Bartman, 180th Fighter Wing Commander, Ohio Air National Guard and Congresswoman. Due in part to more than \$50 million in legislatively directed projects, Northern Ohio is emerging as one of three major solar-energy centers in the Western Hemisphere. The 180th Air National Guard base boasts the largest solar plant of any such facility in America.

The University of Toledo, fueled by federal funding, is recognized as an international leader in research and development of photovoltaic-related materials and products.

ABC News has [profiled our region](#) as the "Silicon Valley" of alternative energy.

Considering our region's legacy as a glass-making capital and its long history as a manufacturing center, the transition to solar energy and other clean renewables is only logical.

Taking the lead on alternative energy will not only create new, good-paying jobs, but also help our energy-hungry nation and world break the economic and political stranglehold of petroleum.

Solar Energy's Main Hub: Toledo, Ohio

Reinventing oneself in troubled times is a sure sign of the steadfastness of the Midwest, and a core value to Ohioans of the Ninth Congressional District. Scientists and entrepreneurs alike are coming together in to use the Midwestern ingenuity and resources, like a known glass industry, in and around Toledo to support solar energy technology development and implementation. Read more about this ingenuity here:

- [Northern Ohio Leads the Nation in Solar Energy Development](#)
- [Kaptur Announces NASA Partnership with UT To Advance Solar Energy Research](#)
- [Kaptur Breaks Ground on Mixed Technology Incubator](#)

Solar Companies in Northern Ohio:

- First Solar Inc.--Main research center and only U.S. manufacturing plant in suburban Toledo.
- Calyxo USA Inc.--Subsidiary of Germany's Q-Cells AG developing new ways to make solar panels.
- Xunlight Corp.--Startup founded by University of Toledo researcher makes flexible, lightweight panels.
- Willard & Kelsey Solar Group LLC--Private group will begin panel production early next year.
- Solar Frames USA LLC--Installer of solar fields and panels.
- Pilkington North America Inc.--Automotive glass maker now supplies First Solar with glass.

Research at the University of Toledo

The University of Toledo houses one of the The Wright Center for Photovoltaics Innovation and Commercialization (PVIC) as well as work in the Physics and Astronomy.

Solar Projects for the Department of Defense

The Department of Defense Research and Development Program funded the [180th Fighter Wing's Renewable Energy Project](#) in an effort to reduce the 180th's use of limited fossil fuel and dependence on foreign energy sources. Once completed, the solar field is expected to produce 800-900 Kilowatts of electricity, which will allow the 180th to save approximately 37.5% on the annual electricity budget. The solar field will also reduce the amount of coal burned to produce energy by almost 250 tons annually, while at the same time reducing harmful emissions and greenhouse gasses.

The Wright Center for Photovoltaics Innovation and Commercialization

The Wright Center for Photovoltaics Innovation and Commercialization (PVIC) consists of a world class science and technology platform in the State of Ohio employing second and third

generation Photovoltaics materials tailored primarily for applications in clean electricity generation.

Three Primary locations of the Center are the University of Toledo, The Ohio State University, and Bowling Green State University.

PVIC was created in January 2007 with \$18.6 M in support from the Ohio Department of Development, along with matching contributions of \$30 M from Federal Agencies, Universities, and Industrial Partners.

Besides reducing solar costs and improving technologies, future successes of PVIC will be in transferring these new techniques from the laboratories to the production lines.

Other Resources

[A guide to installing solar energy](#)

[Alternative energy tax credits for which you may be eligible](#)

[Funding opportunities from the The American Recovery and Reinvestment Act Related to Energy](#)